**Sexually Transmitted Infections**

**Bacterial**

***Chlamydia***

**What is it?**

* The most common bacterial sexually transmitted infection
* Greatest number of infections found in people 15 to 24 years old
* Can affect the cervix and urethra, and occasionally the rectum, throat and eyes

**How is Chlamydia transmitted?**

* Chlamydia can be spread through unprotected oral, vaginal or anal sex with an infected partner
* Penetration and ejaculation are not required for transmission
* It can be passed from an infected mother to her infant during birth, causing lung and/or eye infections.

**What are the signs and symptoms?**

* Many infected individuals have no symptoms
* Symptoms may occur from two to six weeks after initial exposure to the bacteria.
  + Female
    - Vaginal discharge
    - Painful urination
    - Lower abdominal pain
    - Vaginal bleeding after intercourse or between menstrual periods
    - Eye or rectal infection (rarely)
  + Male
    - Clear, watery or milky urethral discharge
    - Itchy urethra
    - Painful urination
    - Testicular pain
    - Eye or rectal infection (rarely)

***Gonorrhea***

**What is it?**

* The second most common bacterial STI
* Two-thirds of reported cases in Canada are in men
* Most common in individuals 15 to 29 years
* Can affect the cervix, urethra, rectum, throat, and occasionally the eyes
* Often occurs as a co-infection with Chlamydia

**How is gonorrhea transmitted?**

* Gonorrhea can be spread through unprotected oral, vaginal or anal sex with an infected partner
* Penetration and ejaculation are not required for transmission
* It can be passed from an infected mother to her infant during birth, causing an eye infection.

**What are the signs and symptoms?**

* Female: Women are most often asymptomatic. Thos that do exhibit symptoms may experience:
  + Increased vaginal discharge
  + Painful urination
  + Lower abdominal pain
  + Vaginal bleeding after intercourse or between menstrual periods
  + Pain during intercourse
  + Rectal pain, discharge or itching
* Male: Most men develop symptoms within two to seven days of infection:
  + Thick, yellowish-green discharge from penis
  + Painful urination
  + Testicular pain or swelling
  + Rectal pain, discharge or itching

***Syphilis***

**What is it?**

* An infection sometimes called the great imitator because symptoms mirror those of some common medical conditions
* Progresses in stages
* Infectious in the first year after contraction

**How is syphilis transmitted?**

* Through oral, vaginal or anal sex with an infected partner
* Through direct contact with bacteria contained in syphilitic sores or rashes
* In rare cases, from sharing unclean needles or receiving a blood transfusion
* From an infected mother to her fetus, which can result in fetal death or congenital syphilis (causing birth defects)

**What are the signs and symptoms of infectious syphilis?**

* Primary syphilis
  + Three days to three months after exposure, infected individuals develop a small painless sore called a chancre
  + The sore appears where the bacteria entered the body (e.g. external genitalia, on the cervix, in the vagina, under the foreskin, in the anus, mouth or throat)
  + The chancre is painless and can be missed easily; while it heals on its own without treatment, the infection remains
* Secondary syphilis: A person may develop a range of symptoms from two to 24 weeks after exposure most commonly:
  + A general feeling of being unwell
  + A rash anywhere on the body by classically on the palms of the hands or soles of the feet
  + Patchy hair loss
  + Flat, smooth warts in the genital area (not the same as those caused by HPV)
* Early latent syphilis
  + Is generally asymptomatic, but for the first year after infection lesions or rashes or primary or secondary syphilis can recur and the infection can be transmitted.

**Viral**

***Genital Herpes***

**What is it?**

* Herpes simplex virus (two types: HSV-1, traditionally associated with cold sores, and HSV-2, traditionally associated with anogenital herpes)
* May cause a single outbreak or recurrences over time.
* Recurrences may be triggered by:
  + The menstrual cycle in women
  + Emotional stress
  + Illness (especially fever)
  + Sexual intercourse
  + Surgery
  + Exposure to sun (including tanning beds)
  + Use of certain medications

**How is genital herpes transmitted?**

* Through direct vaginal, oral or anal sexual contact with an infected partner
* By receiving oral sex from a partner with a history or cold sores
* Through asymptomatic shedding (transmission of the virus when there are no symptoms or lesions)\
* From an infected woman to her infant during pregnancy or birth
* Less commonly through fomite transmission – contact with contaminated objects such as towels.

Condoms have limited effectiveness at preventing infection as they do not cover the entire genital area.

**What are the signs and symptoms?**

* Not all infected people develop symptoms
* Symptoms may emerge two to 21 days after initial infection; usually after six
* Prior to an outbreak, the infected person may feel a tingling or burning sensation where the virus first entered the skin or – in the case of a recurrence – where there were lesions
* During as outbreak:
  + Painful sores (external or internal)
  + Inflammation and redness
  + Fever
  + Muscular pain
  + Tender lymph nodes

An outbreak resolves in 17 days for men and 23 days for women, on average.

Atypical signs and symptoms (without lesions): Genital pain, urethritus, aseptic meningitis or cervicitis

***Hepatitis B***

**What is it?**

* A virus that affects the liver
* A virus found in blood and body fluids including the vaginal secretions, semen, breast milk and saliva of infected individuals
* Most infected people (90%) naturally produce antibodies to fight the disease, but some develop chronic hepatitis B; they carry the virus all their lives and are infectious for life.
* Chronic infection can significantly damage the liver
* Most common in developing countries

**How is hepatitis B transmitted?**

* Through anal, vaginal or oral sex with an infected person
* Through exposure to infected blood or blood products (e.g. injection drug use with shared equipment, accidental exposure, needlestick)
* Occasionally from contact with shared household items (such as toothbrush or razor)
* During childbirth (transmission from mother to infant)

**What are the signs and symptoms?**

* In up to 50% of people, there are no outward signs of infection.
* Up to eight weeks after exposure to the virus, some people experience flu0like symptoms including:
  + Tiredness
  + Nausea and vomiting
  + Decreases appetite
  + A rash
  + Joint pain
  + Yellowing of the eyes and skin (in rare cases)

***HIV (Human Immunodeficiency Virus)***

**What is it?**

* Virus that destroys cells critical to a person’s immune system, robbing the body of its ability to fight other infections and illnesses.
* Weakens the immune system over time (months to years) until other infections occur and Acquired Immunodeficiency Syndrome or AIDS (the fatal stage of HIV infection) develops

**How is HIV transmitted?**

When the body fluids of an infected person (Blood, semen, pre-semen, vaginal secretions, breast milk) enter the blood stream of another individual – specifically, from:

* Unprotected vaginal, oral or anal sex
* Use of contaminated sex toys
* Shared needles or other drug equipment (i.e. water, cookers, crack pipes)
* HIV – infected blood or blood products
* Household items such as toothbrushes and razors that have touched infected blood
* Transmission during pregnancy, childbirth or breastfeeding (transmission from mother to child)
* HIV cannot be transmitted by mosquitoes or other insects that have made contact with infected blood, nor can it be transmitted through saliva, sweat, tears, urine or feces or infected individuals, unless blood is present.

**What are the signs and symptoms?**

* Two to four weeks after exposure, some infected individuals may experience mild flu-like symptoms that last a few weeks then disappear.
* For most people, symptoms don’t emerge until years after exposure. Once the immune system is weakened, the following may develop:
  + Frequent fever or sweats
  + Joint or muscle pain
  + Persistent skin rashes
  + Swollen glands
  + Sore throat
  + Fatigue or lack of energy
  + Headaches
  + Rapid, unexplained weight loss
  + Nausea, vomiting \, or diarrhea
* A blood test to check for HIV antibodies is the only way to detect HIV infection. It may take up to three months for an infection to be detectable. Anyone at high risk who tests negative initially should retest three months later for certainty.

***HPV (Human Papillomavirus)***

**What is it?**

* One of the most common sexually transmitted infections
* There are over 100 types of HPV; 40 can cause anogenital infection
* It is estimated that 75% of the adult population will have at least one HPV infection during their lifetime
* Low-risk HPV types cause anogenital warts and other lesions
* High-risk HPV types are associated with cancer (mainly of the cervix)
* Vaccination is available to prevent certain types of HPV
* Most HPV infections clear on their own within one to two years

**How is HPV transmitted?**

* Through direct sexual contact – primarily vaginal and anal sex, but oral sex is also a risk
* Other sexual activity with intimate contact (genital rubbing or activity causing friction)
* To an infant during delivery (rare)

**What are the signs and symptoms?**

* Many individuals infected with low-risk types have no symptoms (do not develop visible warts or lesions)
* In some people, anogenital warts develop within one to eight months on the vulva, cervix, penis, scrotum, anus or in the urethra. These can be small, soft, flesh-coloured growths, with a cauliflower-like appearance
* The size and number of warts may change over time; eventually most will clear
* During pregnancy, warts may increase in size and number then regress/resolve after delivery
* Other symptoms may include:
  + Itchiness
  + Discomfort during intercourse
  + Bleeding with intercourse

**Parasitic/Fungal**

***Candidiasis (Yeast Infection)***

**What is it?**

* 75% of women develop vaginal condidiasis at least once in their lifetime
* Candida can also affect the mouth, esophagus, skin or blood
* Yeast is normally found in a woman’s vagina. When the fungus begins to grow in excess, it may develop into candidiasis
* Causes of overgrowth include:
  + Pregnancy
  + Recent or current use of antibiotics and certain other prescription medications
  + Sexual activity
  + Poorly controlled diabetes
  + A weakened immune system
  + Genital moisture retention caused by tight-fitting clothing

**How is a yeast infection transmitted?**

* While yeast infection can be transmitted sexually, it is not generally considered an STI
* Men sometimes develop signs of a yeast infection on the head (glans) of the penis after having intercourse with a woman with vaginal candidiasis (she may have no symptoms).

**What are the signs and symptoms?**

* Female: Women with vaginal candidiasis may experience:
  + Vaginal itching
  + Swollen or red vulva and vagina
  + Thick white, clumpy discharge resembling cottage cheese
  + Burning of the external genitalia on urination
  + Pain with intercourse due to vaginal dryness and irritation of the vulva
* Male: Men with an infection of the penis may develop balanitis (inflammation of the head of the penis) and may experience:
  + Itching
  + Red dots on the tip of the penis
  + Dry peeling skin
  + Burning on urination (occasionally)

***Pubic Lice***

**What are pubic lice?**

* Tiny crab-like insects that nest in pubic hair; also found in chest, armpit and facial hair, eyebrows and eyelashes
* Adult insects bite and feed on the blood of their host and lay small eggs (nits) that attach to the shaft of the hair

**How are pubic lice transmitted?**

* Transmission occurs primarily during intimate sexual and non-sexual contact
* Pubic lice can live for one to two days in the bedding, towels and clothes of an infected individual. These items can be a source of transmission

**What are the signs and symptoms?**

* Pubic lice and nits are small and can be difficult to spot. Infected individuals may experience:
  + Skin irritation and inflammation accompanied by itchiness and redness
  + Small blue spots on the skin where lice have bitten
  + Louse feces (fine black particles) in the infected person’s undergarments

***Scabies***

**What are scabies?**

* Parasitic mites that burrow below the surface of the skin
* Eggs laid under the skin hatch; larvae move to new areas and spread infection
* Mites prefer warm zones (folds of skin on elbows, wrists, buttocks, knees, shoulder blades, waist, breasts and penis, between the fingers and under nails)

**How are scabies transmitted?**

* Through close contact – sexual or non-sexual
* Scabies can live for three days on clothing, towels and bedding; these can be a source of transmission

**What are the signs and symptoms?**

* Within three to four weeks of infestation:
  + Intense itchiness, especially at nighttime
  + Reddish rash (on fingers, wrists, armpits, waist, nipples, penis)
  + With recurrences, the same symptoms occur but more rapidly (within hours to days of a re-infestation)

***Trichomoniasis***

**What is it?**

An infection caused by Trichomonas vaginalis, a microscopic, single-celled organism that can be found in the urethra, bladder, vagina, cervix, or under the foreskin.

**How is trichomoniasis transmitted?**

* Through unprotected sexual activity, including mutual masturbation and sharing of sex toys

**What are the signs and symptoms?**

* Female: About half of infected women show signs of infection including:
  + Off-white or yellowish-green frothy vaginal discharge
  + Sore or itchy vagina
  + Pain during intercourse or urination
* Male: Trichomoniasis infections tend to be asymptomatic in men. When symptoms occur, they can include:
  + Irritation or redness at the urethral opening
  + Burning during urination or ejaculation